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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,694	03/26/2001	Gonzalo Amador	TI-30592	9346

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EXAMINER

TOLEDO, FERNANDO L

ART UNIT	PAPER NUMBER
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2823

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,694

Applicant(s)

AMADOR ET AL.

Examiner

Fernando Toledo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) 13-15 and 18-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. The invention elected by original presentation is a patentably distinct species of the invention from the newly submitted claims 12 – 21. Newly submitted claims 12, 16 and 17 are generic to both inventions. The original species includes rotating each of the wafers at constant speed and synchronously with each other by turning each of the several support means. The newly submitted claims include rollers, grooves and gears.
2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 13 – 15 and 18 – 21 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 – 5, 12 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Shacham-Diamand et al. (U. S. patent 5,830,805 A).

In re claim 1, Shacham-Diamand, in the U. S. patent 5,830,805 A; figures 1 – 7C and related text, discloses maintaining several wafers approximately parallel to each other at predetermined distances by supporting an edge of each of the wafer between several of support means (figures 2 and 5); immersing the wafers into an electroless plating solution flowing in laminar motion at constant speed substantially parallel to the active surface of the wafers (column 4); rotating each of the wafers at a constant speed and synchronously with each other by turning each of the several of support means (figure 5, column 7); creating periodic relative motion in changing directions between the plating solution and the wafers, thereby uniformly plating layers onto the exposed metallization by controlled electroless deposition (column 7).

In re claim 2, Shacham-Diamand discloses, the exposed metallization are non-oxidized copper metallization of bond pads positioned in the integrated circuits having copper metallization (column 5).

In re claim 3, Shacham-Diamand discloses, wherein the several wafers includes between 10 and 30 wafers (column 7).

In re claim 4, Shacham-Diamand discloses, wherein the relative motion includes periodic superposition of directions and speeds of the motion of the wafers and the motion of the solution, thus creating periodically changing wafer portions where the directions and speeds are additive and where the directions and speeds are opposed and subtractive (column 7).

In re claim 5, Shacham-Diamand discloses inserting the wafers into a clean-up or presoak bath; removing the wafers from the clean-up presoak bath; and inserting the wafers into the plating solution (column 2).

In re claim 17, Shacham-Diamand discloses wherein the step of immersing the wafer includes the wafer and the support means in a tank and the step of flowing plating solution includes flowing the solution from the bottom of the tank to the top of the tank (Figure 5).

Response to Arguments

Applicant's arguments filed 30 January 2003 have been fully considered but they are not persuasive for the foregoing reasons.

Applicant contests that Shacham-Diamand does not disclose "maintaining a plurality of said wafer between a plurality of support means" and "rotating each of said wafers at constant speed and synchronously with each other by turning each of said plurality of support means."

Examiner respectfully submits that Figure 5 of Shacham-Diamand does show several of the wafers 220 between several of support means 226 and rotating (216) each of the wafers at constant speed and synchronously with each other by turning each of the several support means.

Therefore, the application stands rejected as indicated above.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fernando Toledo whose telephone number is 703-305-0567. The examiner can normally be reached on Mon-Fri 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and 703-308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


FToledo
April 4, 2003


George Fourson
Primary Examiner
Art Unit 2823